

### **REMARKS**

The foregoing amendment amends claims 1 and 5 and adds claim 6. Now pending in the application are claims 1 and 3-6, of which claims 1, 3, 4 and 5 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

#### **Patentable Subject Matter**

Claim 3 is allowed. Claim 5 is indicated to recite patentable subject matter and would be allowable if rewritten in independent form. In the foregoing amendment, Applicants amend claim 5 to rewrite in independent form by incorporating all of the limitations of base claim 4.

#### **Claim Amendments**

Applicants amend claim 1 to clarify the scope of the claimed invention. In particular, claim 1 is amended to recite a two-wire type communication system. Claim 1 is also amended to recite that two terminating resistors are respectively connected to the transmission lines via the low pass filter so as to terminate the transmission lines at different DC potentials via the low pass filter. Support for claim amendment can be found in the figures and corresponding descriptions in the specification. No new matter is added.

#### **Rejection of Claim 4 under 35 U.S.C. § 103**

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art ("AAPA") in view of U.S. Patent No. 6,127,840 ("Coteus"). Applicants respectfully traverse this rejection for the following reasons.

Claim 4 is directed to a reception circuit for receiving a transmission signal represented by two AC components being opposite in phase and appearing in a communication system utilizing two-wire type transmission lines. The reception circuit includes an AC coupling circuit for extracting the AC components from the transmission

lines, and two bias circuits being independent from each other and each for applying a bias voltage to each of the AC components extracted by the AC coupling circuit. The reception circuit also includes two clip circuits being independent from each other and each for clipping the level of each of the biased AC components at levels between a potential and a ground level.

Applicants respectfully submit that AAPA and Coteus fail to teach or suggest *two clip circuits being independent from each other and each for clipping the level of each of the biased AC components at levels between a potential and a ground level*, as recited in claim 4. The Examiner admits in the Office Action that AAPA does not teach the two clip circuits of the claimed invention. Coteus is cited by the Examiner to compensate for the deficiencies of the Coteus reference.

Coteus teaches a signal line termination circuit in which two independent clip circuits are used for clipping a *single* transmission line at upper and lower limits. Those clipping circuits of the Coteus reference are different from the clipping circuits of the claimed invention. In the claimed invention, the two independent clip circuits are respectively connected to *two* transmission lines independently from each other. Coteus does not teach two clip circuits being independent from each other and each for clipping the level of each of the biased AC components at levels between a potential and a ground level, as recited in claimed invention.

In light of the foregoing arguments, Applicants submit that the combination of AAPA and Coteus fails to teach all of the limitations of claim 4. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claim 4 under 35 U.S.C. §103(a), and pass the claim to allowance.

#### Rejection of Claim 1 under 35 U.S.C. § 103

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,396,282 (“Minuth”) in view of U.S. Patent No. 5,896,417 (“Lau”). Applicants respectfully traverse this rejection for the following reasons.

Claim 1 is directed to a *two-wire type* communication system utilizing two-wire transmission lines. The communication system includes a plurality of nodes respectively connected to the two-wire transmission lines. Each of the nodes has a low pass filter connected to the transmission lines, and two terminating resistors respectively connected to the transmission lines via the low pass filter to *terminate the transmission lines at different DC potentials via the low pass filter*. The terminating resistors include a first terminating resistor for supplying a first predetermined DC potential to one of the two-wire transmission lines and a second terminating resistor for supplying a second predetermined DC potential different from the first predetermined DC potential to the other of the two-wire transmission lines.

Applicants respectfully submit that Minuth and Lau fail to teach or suggest two a *two-wire type* communication system utilizing two-wire transmission lines in which *two terminating resistors are respectively connected to the transmission lines via a low pass filter to terminate the transmission lines at different DC potentials via the low pass filter*, as recited in claim 1. The Examiner admits in the Office Action that Minuth does not teach the low pass filter of the claimed invention that connects the terminating resistors to the transmission lines. Lau is cited by the Examiner to compensate for the deficiencies of the Minuth reference.

Lau teaches a so-called "full duplex type" communication system having two transmission lines which are not DC-biased differently from each other. As shown in Fig. 1, Lau teaches that no different DC potentials are applied to the lines RX+ and RX-. Lau also teaches in Fig. 2B that the two transmission lines are kept at the same potentials because the resistors RD+, RD-, RE+ and RE- have the same resistor values.

In contrast, the claimed invention is directed to a two-wire type communication system having two transmission lines that are DC-biased differently from each other, which is a so-called "half duplex type" communication system. The resistors RD+ through RE- in Lau are not equivalent to the terminating resistors of the claimed invention. Lau does not teach that the terminal resistors terminating at different DC potentials are connected through a low

pass filter to the two transmission lines in each node of the communication system, as recited in the claimed invention.

In light of the foregoing claim amendments and arguments, Applicants submit that the combination of Minuth and Lau fails to teach all of the limitations of claim 1. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claim 1 under 35 U.S.C. §103(a), and pass the claim to allowance.

#### New Claim

New claim 6 is added to clarify the scope of the claimed invention. New claim 6 depends from claim 1 and adds separate patentable limitations to claim 1. In light of the arguments set forth above, Applicants respectfully submit that new claim 6 is patentably distinct over the cited prior art references and request the Examiner to pass the claim to allowance.


#### Conclusion

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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